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ANALYSIS OF THE POPULATION OF THE CAPE KENNEDY AREA

by

Ralph H. Blodgett

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THE POPULATION OF THE CAPE KENNEDY AREA

The study of population growth is basic in assessing the economic development of any area or region. Therefore, in the present study of the economic growth and development of the Cape Kennedy area of East Central Florida (including Brevard, Indian River, Lake, Orange, Osceola, Seminole, and Volusia Counties) and the impact of the NASA program thereon, and in making projections of the possible or probable future economic development of the area, we start with the question of population growth.

Total Population

The total population of the seven-county area under study has increased sharply in recent years under the NASA program. In earlier times, population grew less rapidly in this region than in the State of Florida as a whole. Between 1930 and 1940, for example, the population of the region increased from 165,096 to 208,561. This was an increase of 26.3 per cent, of 2.63 per cent a year on a noncumulative basis. In the State of Florida, population increased from 1,468,211 to 1,897,414. The increase amounted to 29.2 per cent, or 2.92 per cent a year. Over the ten-year period, the region was responsible for just over 10 per cent of the state's increase in population.

Much the same thing was true in the next ten years, except that population increased more rapidly in both the region and the state. In the region, the increase was from 208,561 to 299,333 and amounted to 43.5 per cent, or 4.35 per cent a year. In the state, the increase was from 1,897,414 to 2,771,305. The increase amounted to 46.1 per cent, or 4.61 per cent a year. And, once more, just over 10 per cent of the state's increase in population in the ten-year period occurred in the seven-county region.

Over the period of 24 years from 1930 to 1954, the population of the region grew from 165,096 to an estimated 400,200. The increase was 142.4 per cent, or 5.93 per cent a year. In the whole state, the population increased from 1,468,211 to an estimated 3,462,000, or by 135.8 per cent. This amounted to 5.66 per cent a year. The increase of population in the region amounted to 11.79 per cent of the increase in the state.

The whole situation has changed greatly in the last several years under the NASA program. From 1954 to 1964, the estimated population of the region has increased from 400,200 to 801,900. This has been an increase of 100.37 per cent, or 10.04 per cent a year. In the state, the estimated increase has been from 3,462,000 to 5,705,000, or 64.79 per cent, and this has been an increase of 6.48 per cent a year. Thus, in the past ten years the annual rate of population growth has been more

than half again as great in the region as in the state, and the region has been responsible for almost 18 per cent of the growth of population in the state. Moreover, the growth of total population in the region in the last 10 years has been almost 71 per cent greater than the increase in the preceding 24 years.

The population of the region would have been 82.2 per cent of that actually estimated for it by 1964 if the region had shown the same annual rate of population growth as the state as a whole from 1954 to 1964. The percentage would have dropped to 79.9 if the region had had an annual rate of population growth equal to that of the rest of the state from 1954 to 1964. On the other hand, if the region had gained in population from 1954 to 1964 at the same rate annually as in the period from 1950 to 1954, its population in 1964 would have reached 92.12 per cent of the actual estimate.

As might be expected, increases in total population and in rates of population growth in recent years have not been at all evenly spread over the seven-county region. Brevard County has been the acknowledged leader in connection with increases in rates of population growth. This county gained population at the rate of 2.15 per cent a year from 1930 to 1940, 4.65 per cent from 1940 to 1950, and 9.2 per cent from 1930 to 1954. In the last ten years, this last rate of growth has more than tripled, to an enormous 30.2 per cent a year. The rate of population

growth for the county from 1954 to 1964 was more than four and one half times the rate achieved by Florida as a whole. The total increase in population growth for the county during this ten-year period was second highest in the region and was more than four times the increase in the preceding 24 years.

Next to Brevard County, the neighboring smaller counties of Indian River and Seminole seem to have been most affected in regard to rates of population growth in recent years. The population of Indian River County increased by 3.32 per cent a year from 1930 to 1940, 3.25 per cent from 1940 to 1950, and 4.82 per cent from 1930 to 1954. In the years from 1954 to 1964, however, the annual rate of population growth increased sharply to 11.52 per cent, and the increase in total population in this brief period was more than double that which had occurred in the preceding 24 years.

Much the same thing has happened in Seminole County. There the rate of population growth had been a low 1.90 per cent from 1930 to 1940, 2.05 per cent from 1940 to 1950, and 3.19 per cent from 1930 to 1954, but it increased abruptly to 10.27 per cent a year from 1954 to 1964. The increase in total population which occurred in the last ten years was far more than double the increase of the preceding 24 years. In spite of impressive rates of population growth, however, the total populations of Indian River and Seminole Counties have been too small

to allow these counties to play a large role in increasing the total population of the seven-county region.

Orange County had average annual rates of population growth of 4.09 per cent from 1930 to 1940, 6.40 per cent from 1940 to 1950, and 9.92 per cent from 1930 to 1954, but the rate fell off to 7.79 per cent from 1954 to 1964. However, while the NASA development has not brought about an increase in the average annual rate of population growth, it should be remembered that all of these rates of growth, including the most recent, have been above those for Florida as a whole and that the county has gained more people than any other county in the region in the last ten years. Moreover, its annual average rate of population growth has been fourth highest in the region since 1954.

Volusia County's average annual rate of population growth has increased in the last ten years to a level slightly above that achieved by the whole State of Florida. The county had average annual rates of population growth of 2.56 per cent from 1930 to 1940, 3.82 per cent from 1940 to 1950, and 4.20 per cent over the whole period from 1930 to 1954, but the rate increased to 7.44 per cent from 1954 to 1964. Osceola County lost a few people from 1930 to 1940, and had average annual rates of population growth of only 1.27 per cent from 1940 to 1950 and 2.05 per cent from 1930 to 1954. In the last ten years the rate of growth has come up to 6.36 per cent a year, or almost the same as that for the state as a whole.

Finally, the population of Lake County increased at the rate of 1.77 per cent a year from 1930 to 1940, 3.33 per cent a year from 1940 to 1950, and 3.57 per cent a year from 1930 to 1954. In the period from 1954 to 1964, the rate increased to 4.44 per cent a year. This was an improvement, to be sure, but it left the county with an average annual rate of population growth which was the lowest in the region and well below that of the state as a whole.

To summarize, Brevard County has experienced a spectacular increase in its annual rate of population growth in the past ten years under the NASA program. Less striking but still very large increases in the annual rates of population growth have occurred in Indian River and Seminole. Changes in the annual rates of population growth in the other counties have been considerably less significant. The geographical distribution of the impact of the NASA program on the growth of population in the region is shown in Figure 1, in which the counties are divided into groups on the basis of their total percentage increases in population over the period from 1954 to 1964.

Increases and decreases in average annual rates of population growth in recent years, as compared with earlier periods, are considered significant in evaluating the impact of the NASA program on the population of the region. However, differential changes in rates of growth should not be allowed to hide the fact that all counties in the region have experienced

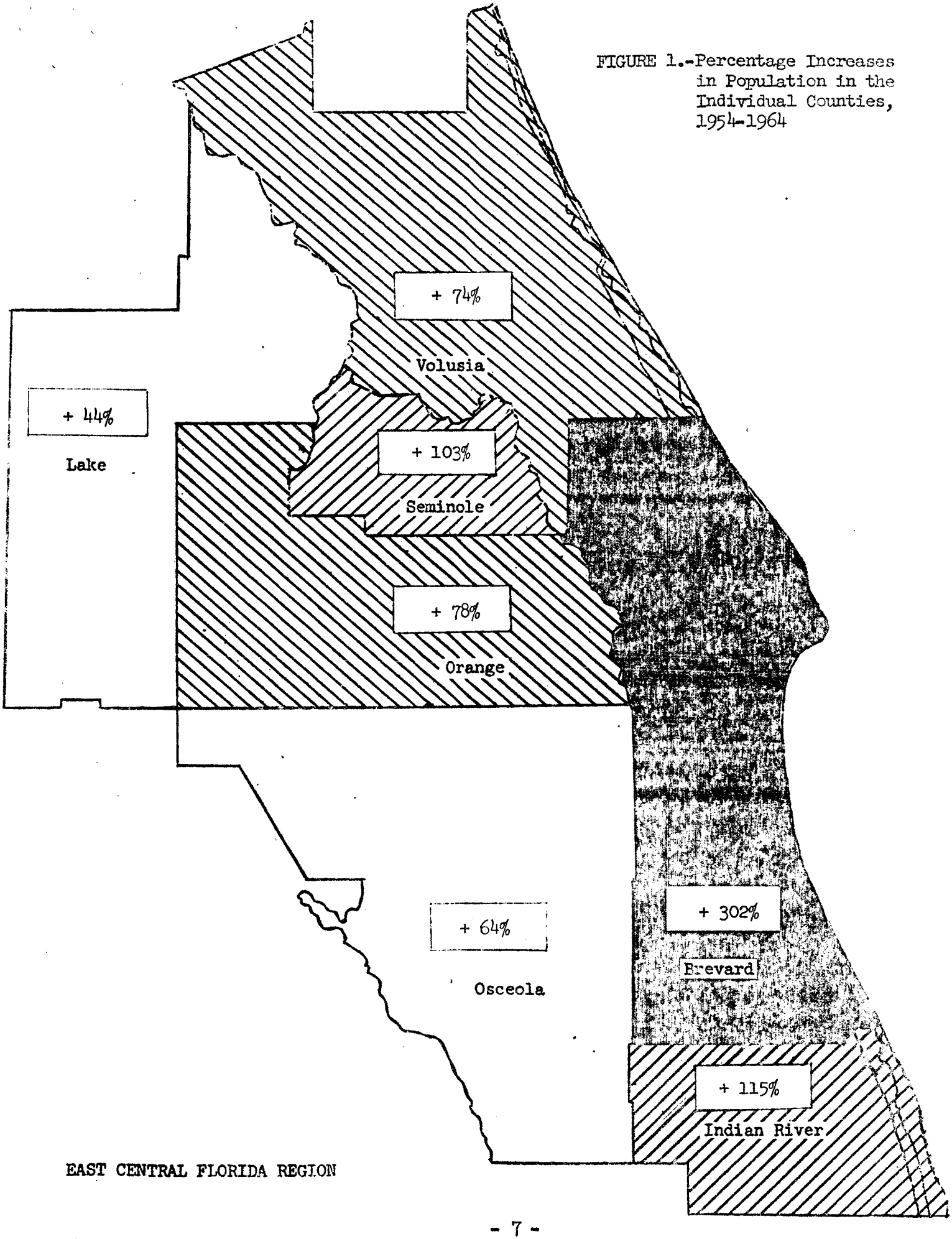


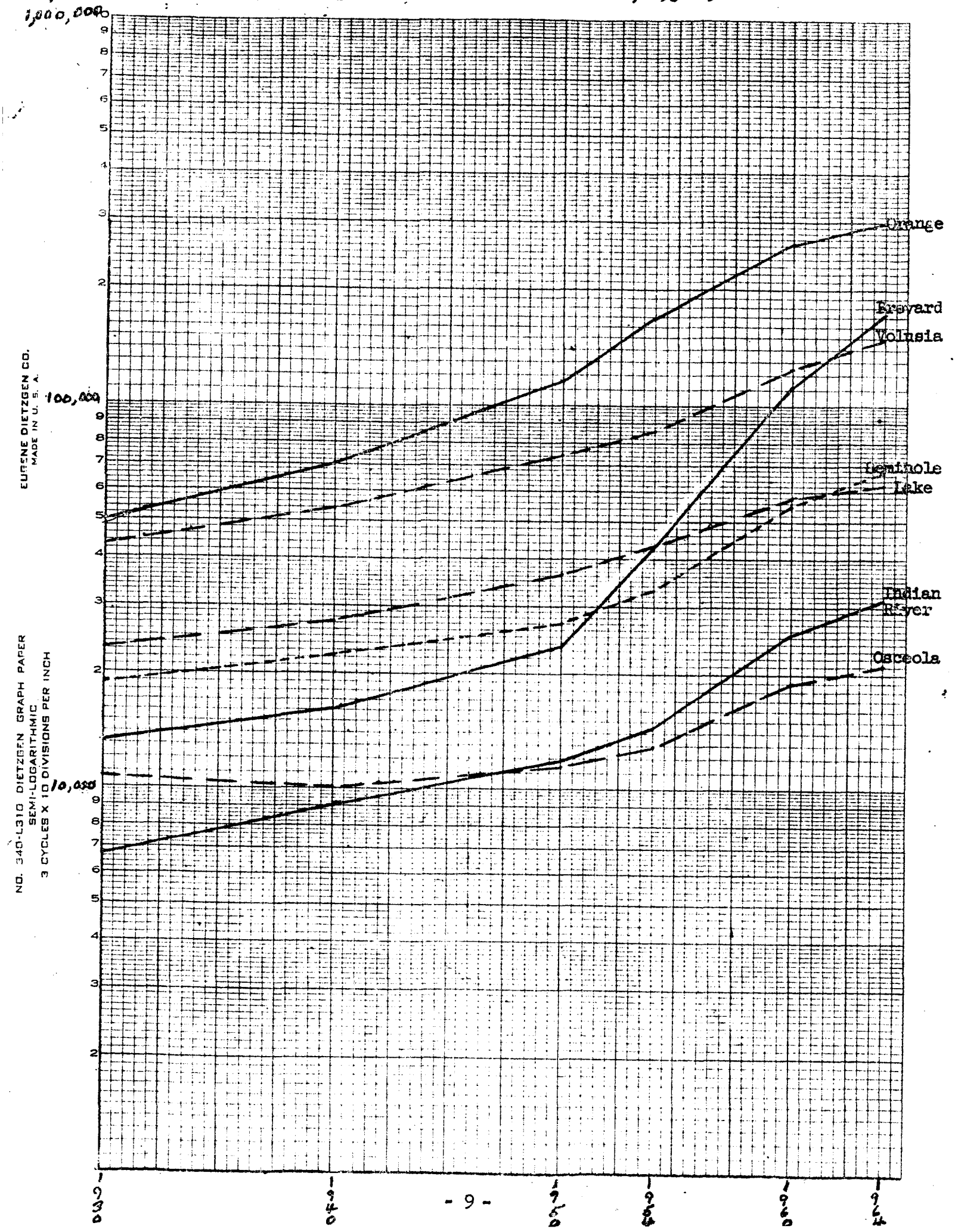
FIGURE 1.-Percentage Increases in Population in the Individual Counties, 1954-1964

large absolute increases in population in the last ten years. Figure 2 shows the increases in population which have occurred in the individual counties of the region from 1930 to 1964, and the large increases in the last ten years stand out clearly.

If we were examining population growth in the seven-county region during the whole period of greatly expanded activities of the federal government on and around Cape Kennedy, and not just during the period in which the NASA program has developed, some of our conclusions would be changed. In the whole period from 1950 to 1964, the population of the region increased by 167.90 per cent and that of the state by 105.86 per cent. The noncumulative annual rates of population growth were 11.99 per cent for the region and 7.56 per cent for the state. Thus, as in the 1954-1964 period, the rate of population growth per year was more than half again as high for the region as for the state.

The situtation of individual counties would be changed somewhat if the longer recent period were considered. Brevard County gained population at a much faster rate than any other county from 1950 to 1964. Its average annual rate of population growth of 44.62 per cent in this period was almost ten times as great as the annual rate of 4.65 per cent which was achieved from 1940 to 1950. Indian River County had an annual rate of population growth of 11.63 per cent from 1950 to 1964. This was far above its annual rate of 3.25 per cent from 1940 to 1950 and slightly above its rate of 11.52 per cent from 1954 to 1964.

FIGURE 2.-Changes in Population of Individual Counties, 1930-1964



Orange County made a much better showing from 1950 to 1964 than it did from 1954 to 1964. Its annual rate of population growth of 11.45 per cent from 1950 to 1964 was much greater than its rate of 6.4 per cent a year from 1940 to 1950 and significantly better than its rate of 7.79 per cent a year from 1954 to 1964. The indication is that Orange County's population started to grow very rapidly even before the NASA program was inaugurated. Seminole County's annual rate of population growth of 10.69 per cent from 1950 to 1964 was only slightly above its rate of 10.27 per cent a year from 1954 to 1964.

The annual rates of population growth of the other three counties in the region (7.27 per cent for Volusia, 6.07 per cent for Osceola, and 5.06 per cent for Lake) were all far below the average rate for the region from 1950 to 1964. All of them were also clearly below the average rate for the state as a whole, although higher than they had been in earlier years. In summary, Brevard County increased in population about six times as rapidly as did Florida as a whole from 1950 to 1964. Indian River, Orange, and Seminole Counties increased in population at rates significantly greater than that of the state as a whole; while Volusia, Osceola, and Lake Counties had annual rates of population growth which lagged behind that of the whole state.

The Composition of the Population

The age composition or "profile" of the population in the subject area (seven counties) has apparently been changing in recent years. In 1930 and in 1950, the population of the subject area was more concentrated in the older age groups than was the population of the state as a whole.

In 1930, persons under 45 years of age in the subject area numbered 123,369 out of 165,096, or 74.8 per cent of the total. In the state as a whole there were 1,153.814 such persons out of 1,468,211 or 78.6 per cent of the total. People between the ages of 20 and 45 amounted to 38.2 per cent of the population in the seven counties, as compared with 39.9 per cent for the whole state.

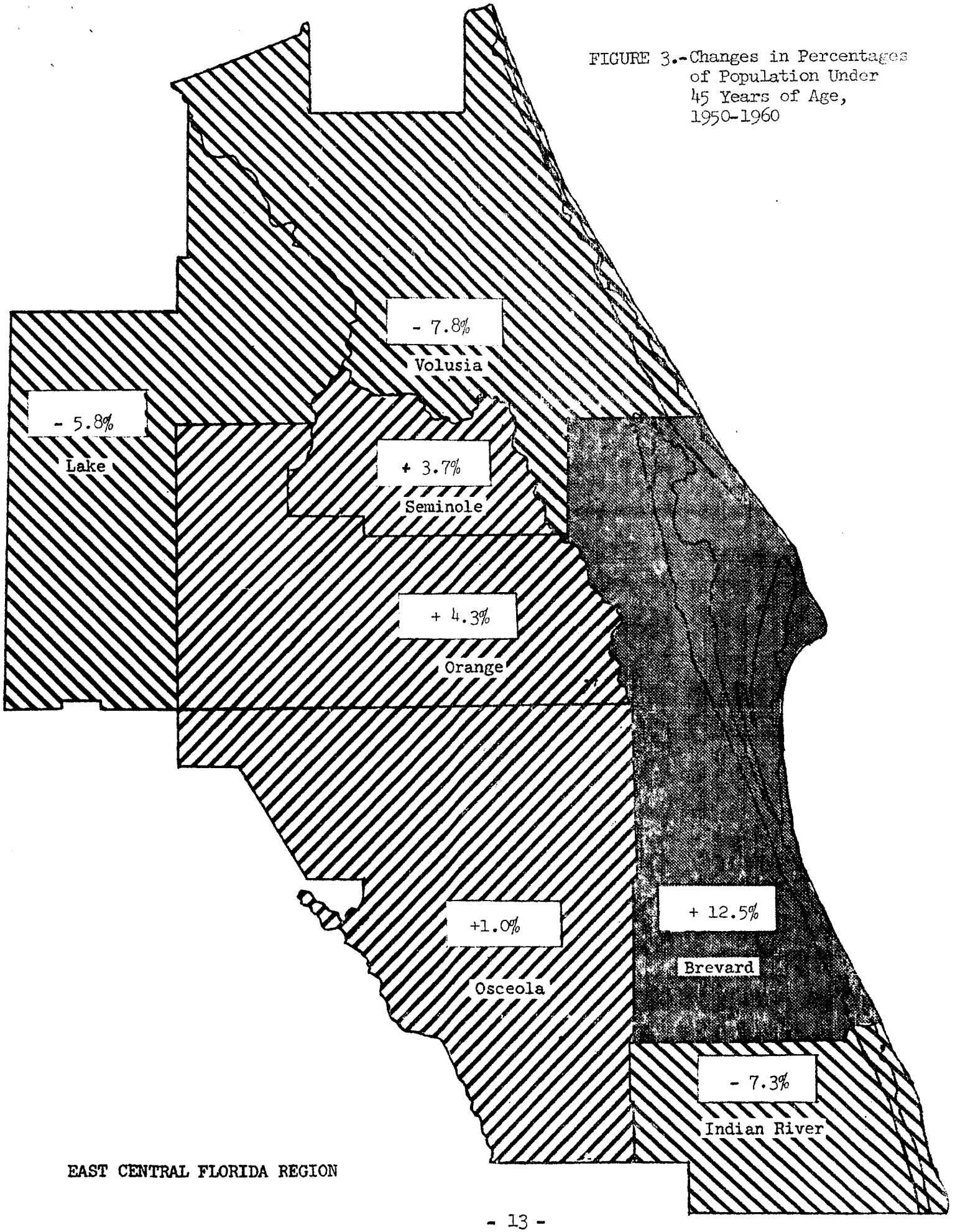
Much the same situation prevailed in 1950. Persons under 45 years of age made up 67 per cent of total population in the seven counties as against 71.2 per cent for Florida as a whole. In the seven counties, 35.6 per cent of the people were between the ages of 20 and 45 in 1950, as compared with 38.4 per cent for the state.

The situation changed somewhat in the next ten years. In 1960, 69.2 per cent of the people in the seven-county area were under 45 years of age, as compared with 68.2 per cent for the whole state. For people between the ages of 20 and 45, the percentages were 32.3 in the subject area and 31.8 for the state as a whole.

In Brevard County, the percentage of the total population under 45 years of age increased from 66.53 to 79.04 between 1950 and 1960, while the other six counties experienced decreases, or increases of one to five per cent. How all the counties fared in this respect is shown in Figure 3. At 79.04 per cent, Brevard County was far and away the leader by 1960 with respect to the proportion of total population under 45 years of age. The other counties varied between 56.08 per cent in Volusia and 74.15 per cent in Seminole. Much of the great change noted in Brevard County should probably be credited to an influx of workers and their families in response to the growth and development of the NASA program and its contractors and suppliers.

Again, Brevard County experienced an increase of three per cent in the proportion of its total population between the ages of 20 and 45 from 1950 to 1960, and at 38.47 per cent was the leader of the region in this respect by 1960. The other six counties showed decreases of 1.52 per cent to 9.41 per cent. Orange County, although it had a decline from 37.79 per cent to 34.86, was second only to Brevard County in 1960 in respect to the proportion of its total population between the ages of 20 and 45. The other five counties fell between 24.40 per cent in Osceola and 32.75 per cent in Seminole.

FIGURE 3.-Changes in Percentages of Population Under 45 Years of Age, 1950-1960



EAST CENTRAL FLORIDA REGION

The Nonwhite Population

On the basis of census data, it is clear that the nonwhite population of the seven-county region, like that of Florida as a whole, has been increasing over the years, but the ratio of nonwhites to total population has declined significantly in both the region and the state.[1] There has also been a shift in the relationship of the region to the state. In 1930, 1940, and 1950, the ratio of nonwhites to total population in the region ran somewhat above that for the state as a whole. Between 1950 and 1960 the ratio declined much more in the region than in the state, so that nonwhites made up 16.1 per cent of total population in the region as against 17.9 per cent in the state. The white population of the region has clearly been growing much more rapidly than the nonwhite population in recent years.

Average ratios of nonwhites to total population for the region over the years cover up large differences from county to county. In 1930, the ratios ran from 45.9 per cent in Seminole County to 24.6 per cent in Orange County, and even in 1960 the ratios were distributed between 24.7 per cent for Seminole County and 10.6 per cent for Osceola County. Figure 4 shows the changing ratios of nonwhites to total population for the individual counties from 1930 to 1960, and it is apparent that these ratios have been declining for all counties in the region.

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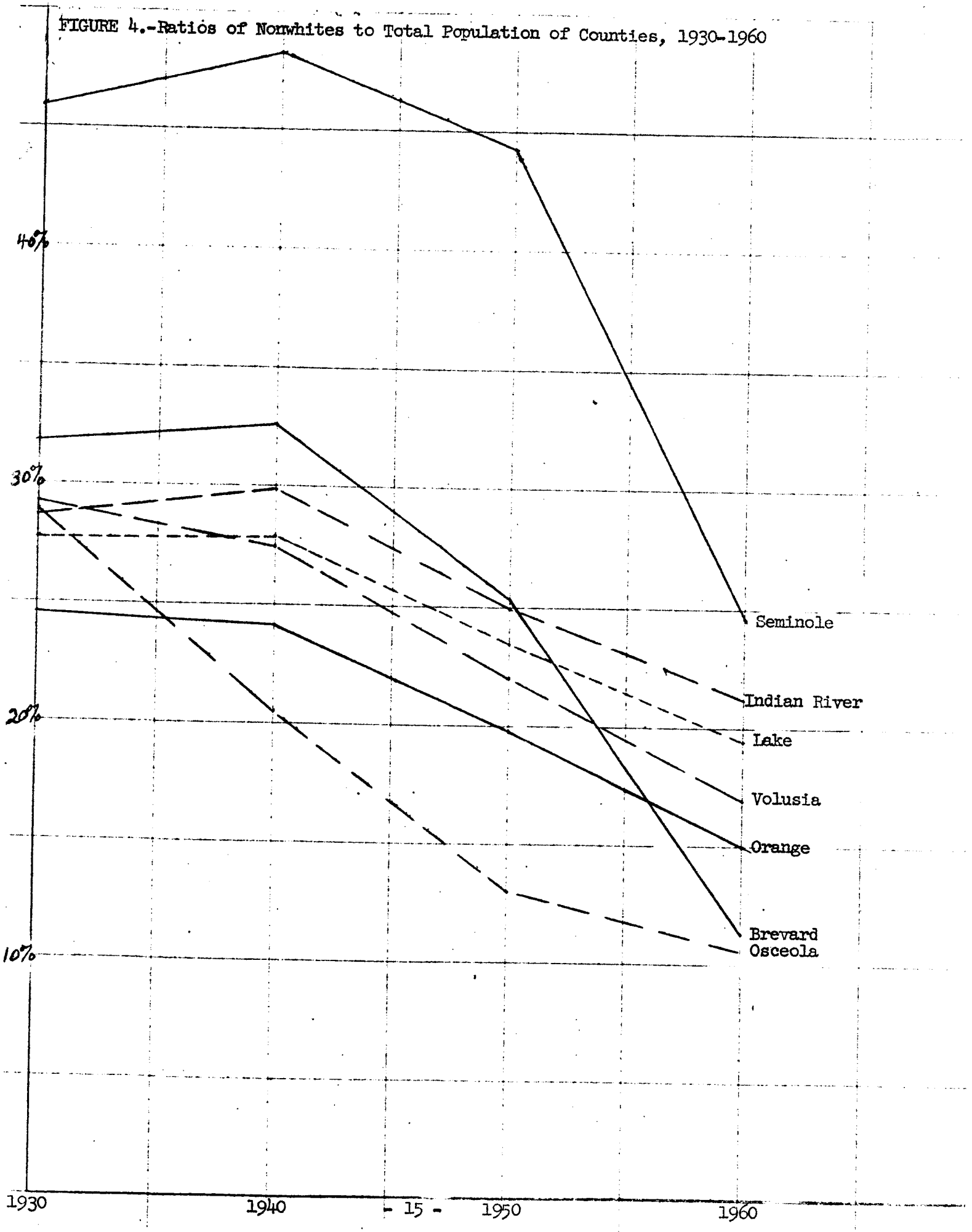
[1] In the seven-county area, Negroes make up between 99 and 100 per cent of the nonwhite population.

FIGURE 4.-Ratios of Nonwhites to Total Population of Counties, 1930-1960

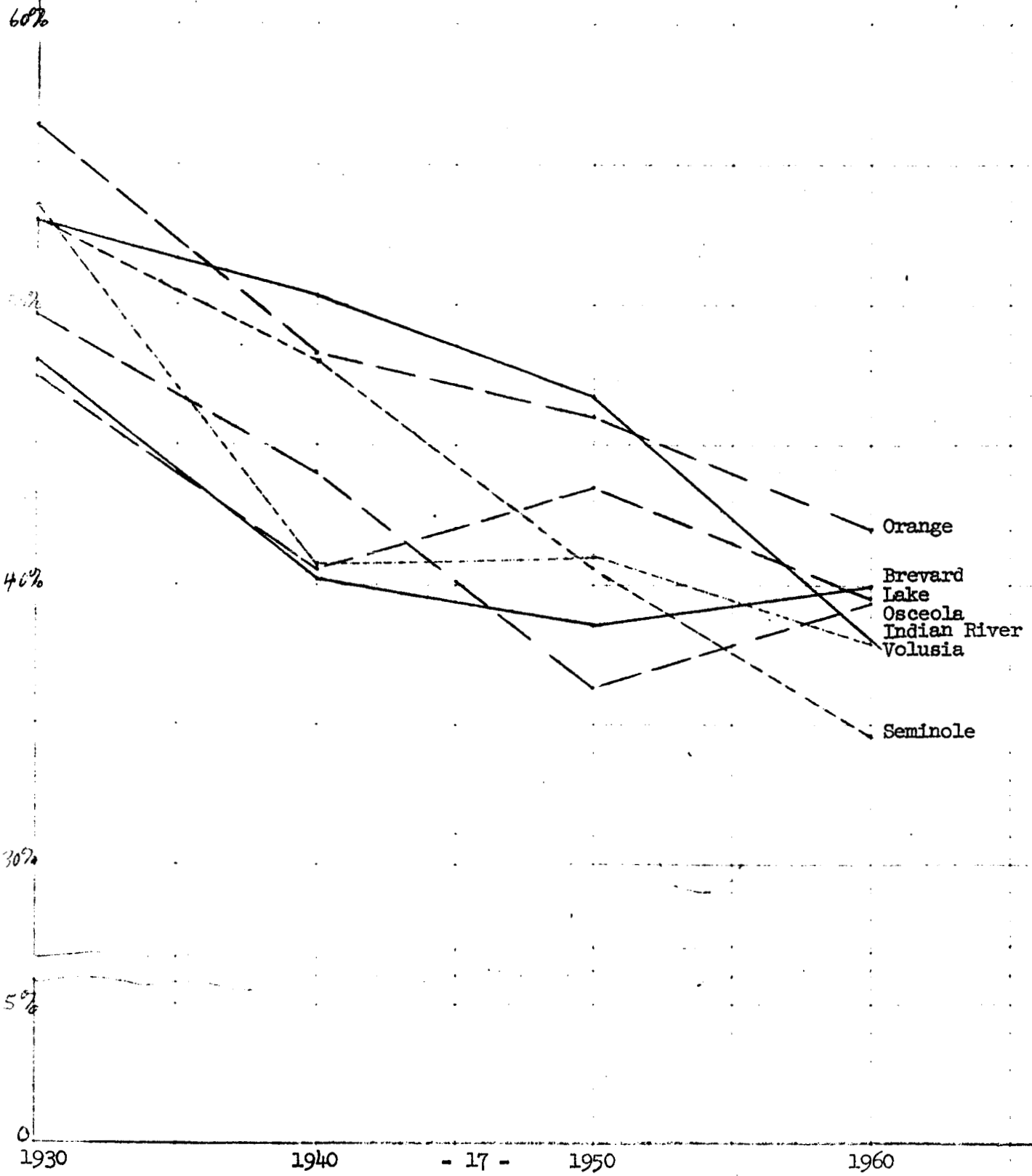


The ratio for Brevard County in 1960 was obviously next to the lowest in the region, while that for Orange County was second from low. And in Brevard County, the ratio of nonwhites to total population, which had been 31.8 per cent in 1930, had fallen to 11.3 per cent by 1960. Thus the data seem to show that the counties which have gained the largest numbers of people in recent years have acquired white people much faster than nonwhites.

The employment of nonwhites has been increasing over the years in both the region and the state, but the ratio of employed nonwhites to total nonwhites has been falling steadily and rather rapidly in both areas, or from 52.6 per cent in 1930 to 39.5 per cent in 1960 for the region and from 50.4 per cent in 1930 to 40.4 per cent in 1960 for Florida as a whole. The ratio for the region was above that for the state in 1930, 1940, and 1950, but fell below that for the state for the first time in 1960.

Figure 5 shows that the ratios of employed nonwhites to total nonwhites have been declining over the years in all counties in the region and that the intercounty differences in the ratios have been relatively small in all the census years under study. A comparison of Figure 5 with Figure 4 shows that Orange and Brevard Counties, which were among the lowest in their ratios of nonwhites to total population, ranked first and second in 1960 in regard to the ratio of employed nonwhites to total nonwhites. On the other hand, Seminole County, which had the

FIGURE 5.-Ratios of Employed Nonwhites to Total Nonwhites by Counties, 1930-1960

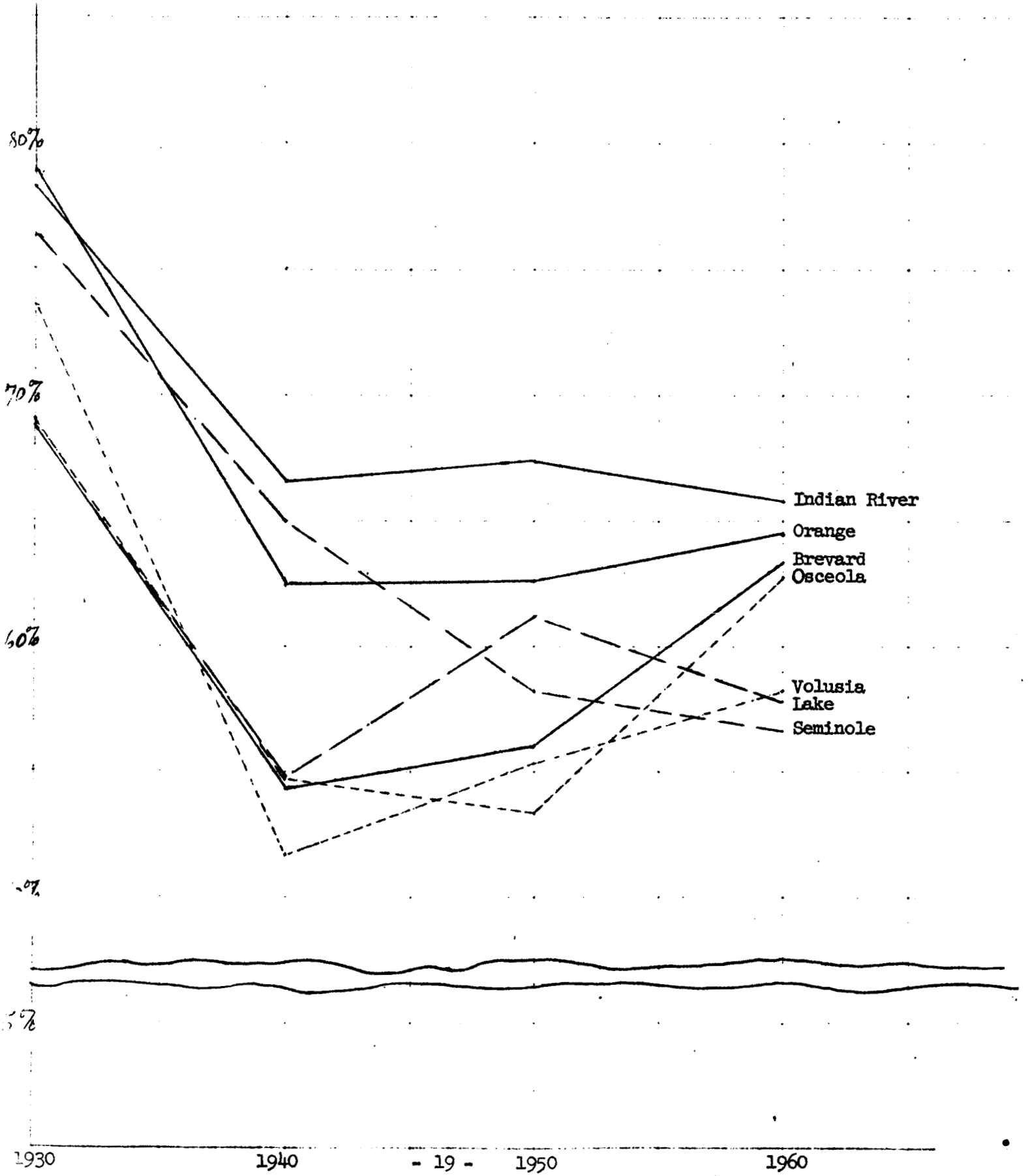


highest ratio of nonwhites to total population in 1960, had the lowest ratio of employed nonwhites to total nonwhites. Thus, the counties with the lowest ratios of nonwhites to total population do the best job of employing those nonwhites which they have, and vice versa.

Declining regional and state ratios of employed nonwhites to total nonwhites have apparently not been due primarily to changes in the age composition of the nonwhite population and concentration of this population in the lower age groups. In other words, state and regional ratios of employed nonwhites to nonwhites aged 14 and over were also lower in 1960 than they had been in 1930. For the region the ratio was 74.2 per cent in 1930 and 61.4 per cent in 1960, whereas for the state it was 71.8 per cent in 1930 and 63.3 per cent in 1960.

Figure 6 shows that the ratios for all the individual counties were lower in 1960 than in 1930, although they have been rising for some counties in recent decades. The graph also shows that the intercounty differences in the ratios run relatively small and that by 1960 the counties with the lowest ratios of nonwhites to total population tended to rank high in regard to the ratios of employed nonwhites to nonwhites aged 14 and over, and vice versa. Orange and Brevard Counties, which were among the lowest in ratios of nonwhites to total population, ranked second and third highest in regard to ratios of employed nonwhites to nonwhites aged

FIGURE 6.-Ratios of Employed Nonwhites to Nonwhites Aged 14 and Over by Counties, 1930-1960

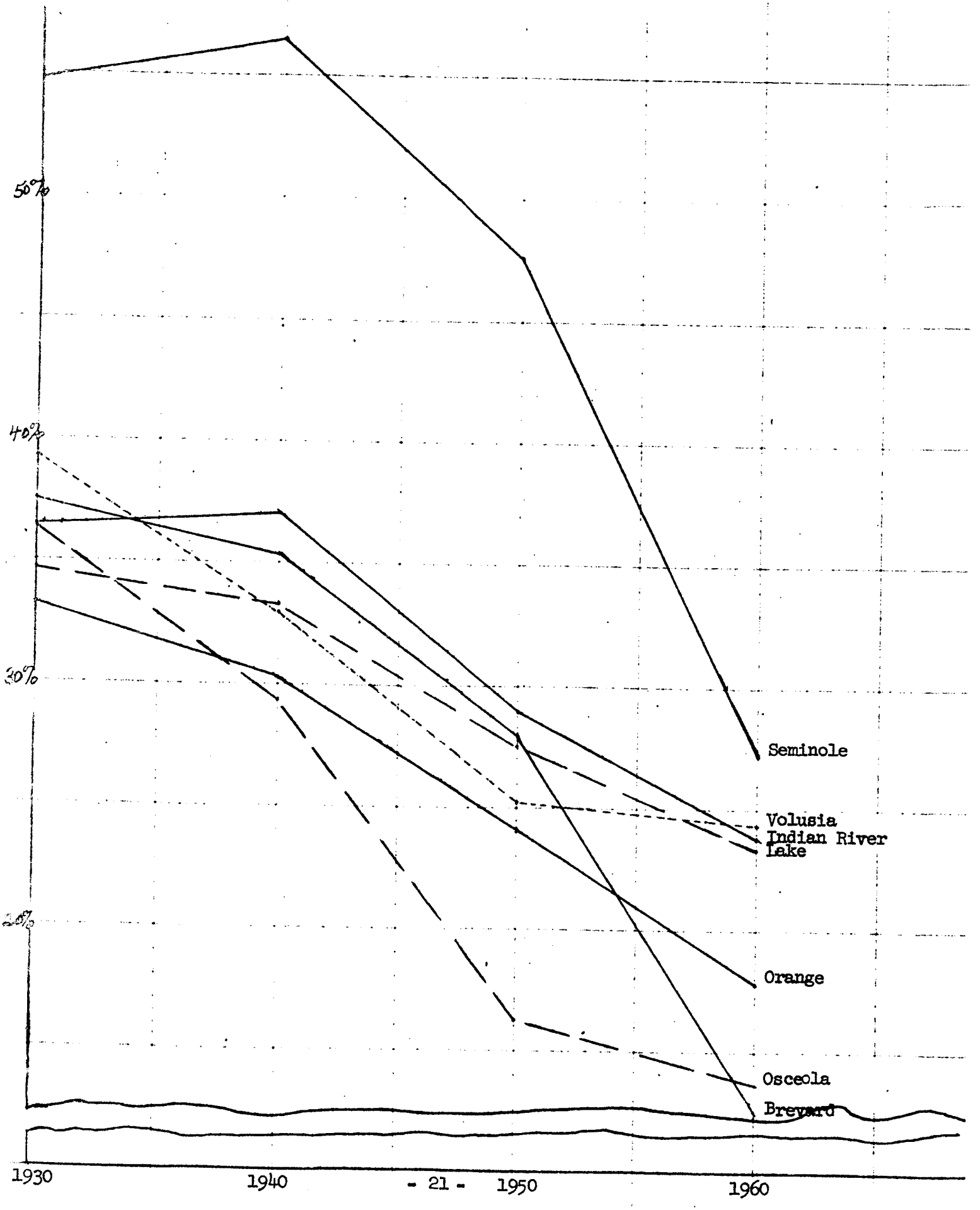


14 and over in 1960. Conversely, Seminole County, which had the highest proportion of nonwhites to total population in 1960, had the lowest ratio of employed nonwhites to nonwhites aged 14 and over.

Finally, in the region, in every county in the region, and in the state as a whole, there has been a striking decline in the 30 years from 1930 to 1960 in the ratios of employed nonwhites to total employed persons. In the region, the ratio fell from 38.3 per cent in 1930 to 18.5 per cent in 1960, or more than half. In the state, the ratio fell from 36.4 per cent in 1930 to 20.8 per cent in 1960. The ratio for the region was higher than that for the state in 1930, 1940, and 1950, but lower in 1960.

Figure 7 shows that the ratios of employed nonwhites to total employed persons have been falling rapidly in all the counties in the region and that intercounty differences in the ratios have been relatively large. A comparison of Figure 7 and Figure 4 reveals that the counties with the lowest ratios of nonwhites to total population have tended to become lowest also in regard to the ratios of employed nonwhites to total employed persons. Brevard and Orange Counties, which had the second and third lowest ratios of nonwhites to total population, were lowest and second from low in the ratios of employed nonwhites to total employed persons.

FIGURE 7.-Ratios of Employed Nonwhites to Total Employed Persons by Counties, 1930-1960



The case of Brevard County is noteworthy. In just ten years, from 1950 to 1960, its ratio of employed nonwhites to total employed persons fell from 28.0 per cent to 12.6 per cent, and in 1960 was about one-third as high as it had been in 1930. In Orange County, the ratio fell from 24.0 per cent in 1950 to 17.8 per cent in 1960 and in the latter year was only about half as high as it had been in 1930. At the other extreme, Seminole County, which had the highest ratio of nonwhite population to total population in all four census years, also had the highest ratio of employed nonwhites to total employed persons in all four census years. However, even in this county the latter ratio fell from 54.8 per cent in 1930 to 27.2 per cent in 1960 and from 47.7 per cent to 27.2 per cent between 1950 and 1960. Figure 8 shows the geographical distribution of the high and low ratios of employed nonwhites to total employed persons among the counties of the region.

We have been examining ratios of nonwhite population to total population, of employed nonwhites to total nonwhites, of employed nonwhites to nonwhites aged 14 and over, and of employed nonwhites to total employed persons. All of these ratios have declined from 1930 to 1960 in both the seven-county region and the state as a whole, but they have all declined more in the region than in the state. Moreover, all of these ratios for the region have fallen below the ratios for the state for the first time in the period from 1950 to 1960. It seems

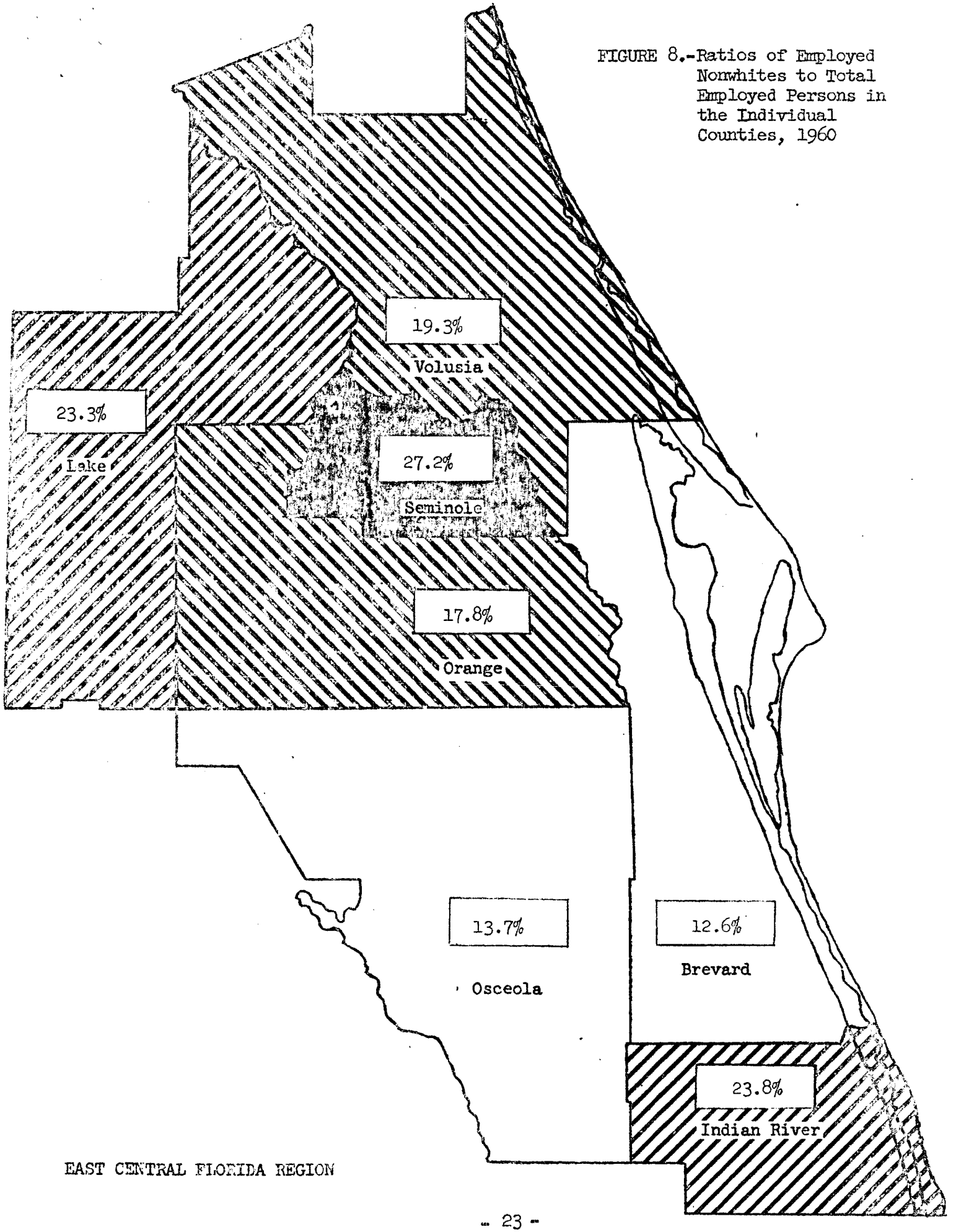


FIGURE 8.-Ratios of Employed Nonwhites to Total Employed Persons in the Individual Counties, 1960

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impossible to conclude that the events of these ten years have brought an improvement in the position of the nonwhite population of the region in connection with the matters studied.

Discrepancies between the counties with regard to these ratios, and sometimes large differences, existed in all the census years studied and individual counties changed their relative positions with respect to the various ratios from time to time. However, by 1960 some things were becoming clear. Those counties, such as Brevard and Orange, which had added the largest numbers of people to their population and which therefore had the largest total populations by 1960, tended to rank low among the seven counties in regard to ratios of nonwhite population to total population and of employed nonwhites to total employed persons. On the other hand, these counties ranked high with respect to ratios of employed nonwhites to total nonwhites and to nonwhites aged 14 and over, and the development of economic activity in these counties under the NASA and other programs could not give employment to nonwhites who were not there in the first place and were not attracted to the area during the period. The most reasonable conclusion would seem to be merely that the overwhelming majority of the persons who joined the population of these two counties and found employment in the years between 1950 and 1960 were white persons rather than nonwhites.

And the same sort of conclusion must be reached in varying degrees for other counties in the region. Whether the individual counties were gaining population rapidly or slowly and whether they ranked high or low with regard to ratios of nonwhites to total population, employed nonwhites to total nonwhites, and employed nonwhites to nonwhites aged 14 and over, all the counties in the region had significantly lower ratios of employed nonwhites to total employed persons in 1960 than in 1950.

Population Projections

In making population projections for the Cape Kennedy area and for the State of Florida, the first question to be decided was the method which would be used. In making population projections, the Bureau of the Census has used two procedures, called the "component" method and the "ratio" method. The component method calls for the preparation of separate projections for each of the three parts (components) of population change: that is, of births, deaths, and net migration. The method furnishes a large amount of useful detail because it builds up each component by age, color, and sex. The main drawback of the method is that separate assumptions must be made for each component: fertility assumptions for births; mortality assumptions for deaths; and, most difficult of all, assumptions as to the amount and the composition of the net gain (or loss) from migration.

The component method can be used rather effectively for the country as a whole because the country is, in a sense, a "closed universe" in which records are kept, by law, of births, of deaths, of emigration, and of immigration. Starting from any base point (census years have special advantages, but any year can be used), fertility and mortality rates are projected on the basis of past experience and on the basis of assumptions about the probable trend of these rates in the future. Much the same procedure applies to the net gains (or losses) from immigration and emigration.

The component method is much more difficult to use in the case of states, counties, and groups of counties. The chief stumbling block is interstate and intrastate migration, which not only affects total population directly, but may also have an indirect effect by modifying fertility and mortality rates. Unlike immigrants and emigrants to and from the United States, interstate and intrastate migrants leave no written records of their moves. In a state or other sub-area in which the gains from migration are larger than the gains from natural increase, the fact that there is no direct record of interstate and intrastate migration becomes critical. Florida presents a striking illustration of this point, for, between 1950 and 1960 gains from migration outnumbered natural increase by about three to one. Under these circumstances, population projections by components become a speculative matter, indeed.

The ratio method, which was used to prepare the projections in this report, takes advantage of the fact that fairly stable ratios can be found between the population of a sub-area (state, county, group of counties) and the population of the larger area (state or country as a whole) of which the sub-area is a part. Then it is assumed that the ratios between the populations of the smaller and the larger areas can be projected, with adjustment for observed tendencies in the ratios to increase or decrease through time. When the ratios for future years have been projected, they are applied to the population for a larger area, for which a population projection has already been made, to obtain the projected population of the sub-areas. This method therefore, shifts the question of the validity of forward projections from the components of change to the ratios between the resultants of change.

The population of the State of Florida can be (and was) projected on the basis of direct ratios between the population of the state and that of the country as a whole. It was also projected indirectly by relating the population of the state to that of census regions (such as the South Region), to census divisions (such as the South Atlantic Division), and to other groupings of states selected on a variety of bases, and thence to the population of the country as a whole. Some of the regions, divisions, and groupings included Florida, while others did not.

The procedure in each use of the indirect method was to compute the ratio of the population in each sub-area of the country (region, division, or grouping of states), and in each state of the sub-area, to the population of the United States for each of the census years from 1870 to 1960. The ratios were then analyzed for trends for the entire period, but more specifically for the period from 1930 to 1960. When significant trends were found, a linear extrapolation to 1980 was made for the years 1965, 1970, 1975, and 1980. The assumption here was that the trend in the ratio for the past 30 years up to 1960 could be projected for the next 20 years. The ratios as projected were then applied to the population projections for the United States.

The next step was to compute the ratios of Florida's population to the population of each of the sub-areas (region, division, or grouping of states), examine these ratios for trend, project them to 1980, and finally apply them to the projected populations of the sub-areas to get projections of Florida's population to 1980 by five-year steps. The projections of Florida's population to be presented later in this report eventually resulted.

It was reassuring to note close agreement in the projected results at the critical levels of the Florida totals, whether the linkage to the population of the United States was direct or indirect and whether the United States total of reference incorporated high, medium, or low

assumptions as to future fertility levels. There was a spread, of course, because of the spread at the level of national projections, and there were choices to be made within this spread at the state level. The spread shown in the state projections represents the maximum difference within the central core of projections.

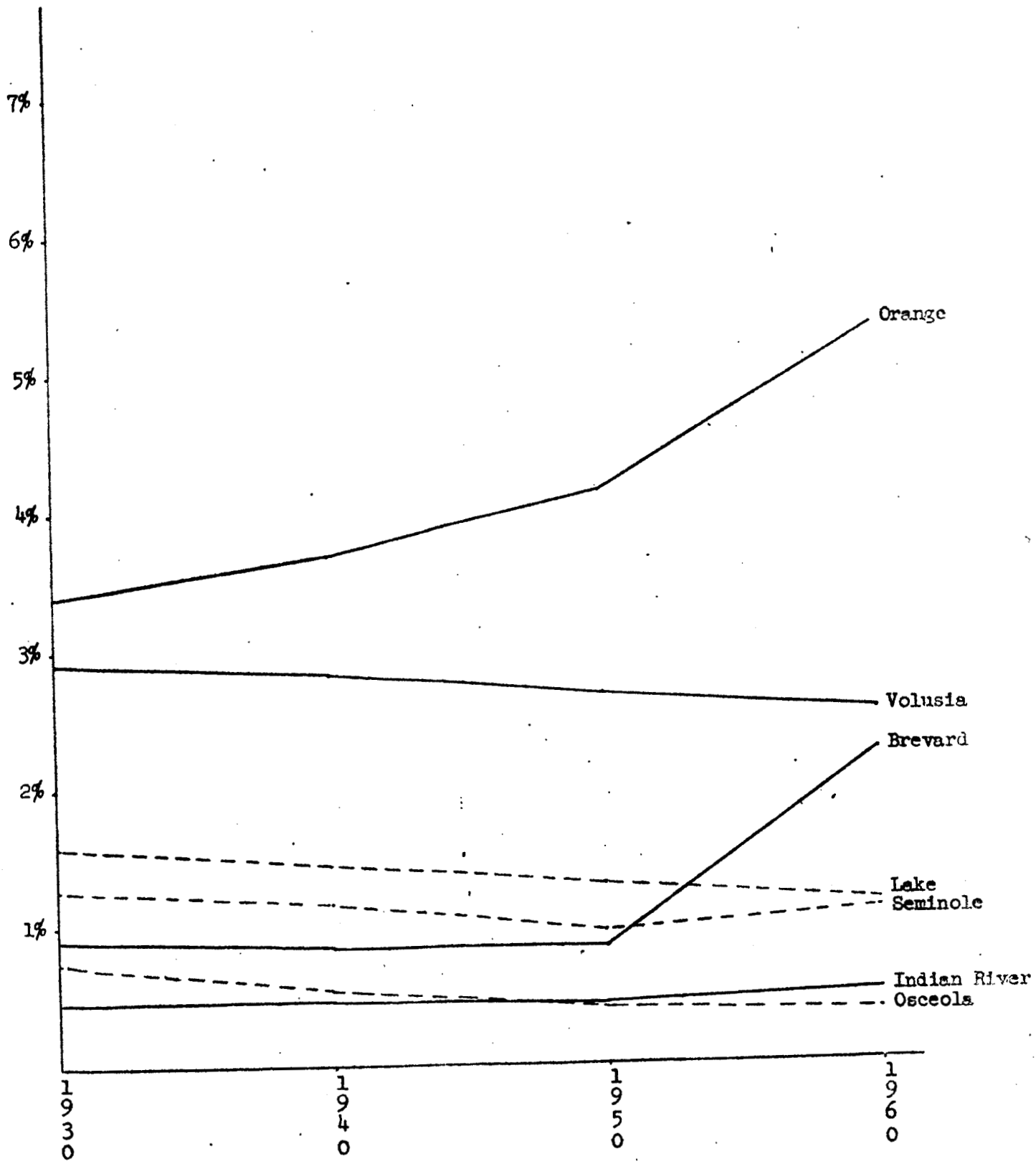
In making projections for the Cape Kennedy area, the populations of the 67 counties of Florida were converted to ratios to the state's population, by census years from 1930 to 1950 and by single years from 1950 to 1963. However, most of the counties had such small populations that the ratios computed were of little significance. This difficulty was solved by assigning the 47 counties which had less than 40,000 persons in 1960 into one of two groups -- those counties with 10,000 population or less and those with populations of 10,000 to 40,000 persons. These groups were given the identity of "County X" and "County Y", and the ratio series then consisted of 22 entries. It was discovered that certain counties or groups of counties had populations which maintained rather stable relationships to the population of the state as a whole. For example, among the 20 counties with populations above 40,000 in 1960, there was a group of 12 whose total population varied only between 19.8 and 20.3 per cent of the state's population between 1950 and 1963.

Population

The population of the Cape Kennedy area was converted into ratios to the population of the state as a whole and to the populations of various sub-areas for past years. These ratios, adjusted for trend as necessary, were projected to 1980 by five-year steps. When applied to the projected populations of the state and the sub-areas of the state, we obtained projections of the population of the Cape Kennedy area for 1965, 1970, 1975, and 1980. The spread in these projections is indicated in the figures to be presented later in this report.

In converting population projections for the Cape Kennedy area into projections for the individual counties in the area, the first step was to examine and compare the growth record of each county from 1930 to 1960, using figures from the decennial censuses of population. The comparison resulted from expressing the population of each county as a per cent of total state population at each census. The results of this computation appear in Figure 9. The lines in the chart show county population growth relative to state growth. That is, a line sloping upward means a rate of growth more rapid than that of the state as a whole, a line parallel to the base line of the chart means a growth rate equal to that of the state, and a line sloping downward means a rate of growth less rapid than that of the state.

FIGURE 9. - POPULATIONS OF INDIVIDUAL COUNTIES AS PERCENTAGES OF THE STATE TOTAL, 1930-1960



In these terms, Orange County over the whole period and Brevard County from 1950 to 1960 grew much faster than did the state, Indian River and Seminole Counties grew less rapidly than the state from 1930 to 1950 and then grew slightly more rapidly from 1950 to 1960, and Lake, Osceola, and Volusia Counties grew slightly less rapidly than did the state as a whole over the whole period. This suggested a grouping of the seven counties into three classes, based on relative growth. The groups of counties are shown geographically in Figure 10.

The next step was to project the population of these three groups of counties on the basis of these assumptions:

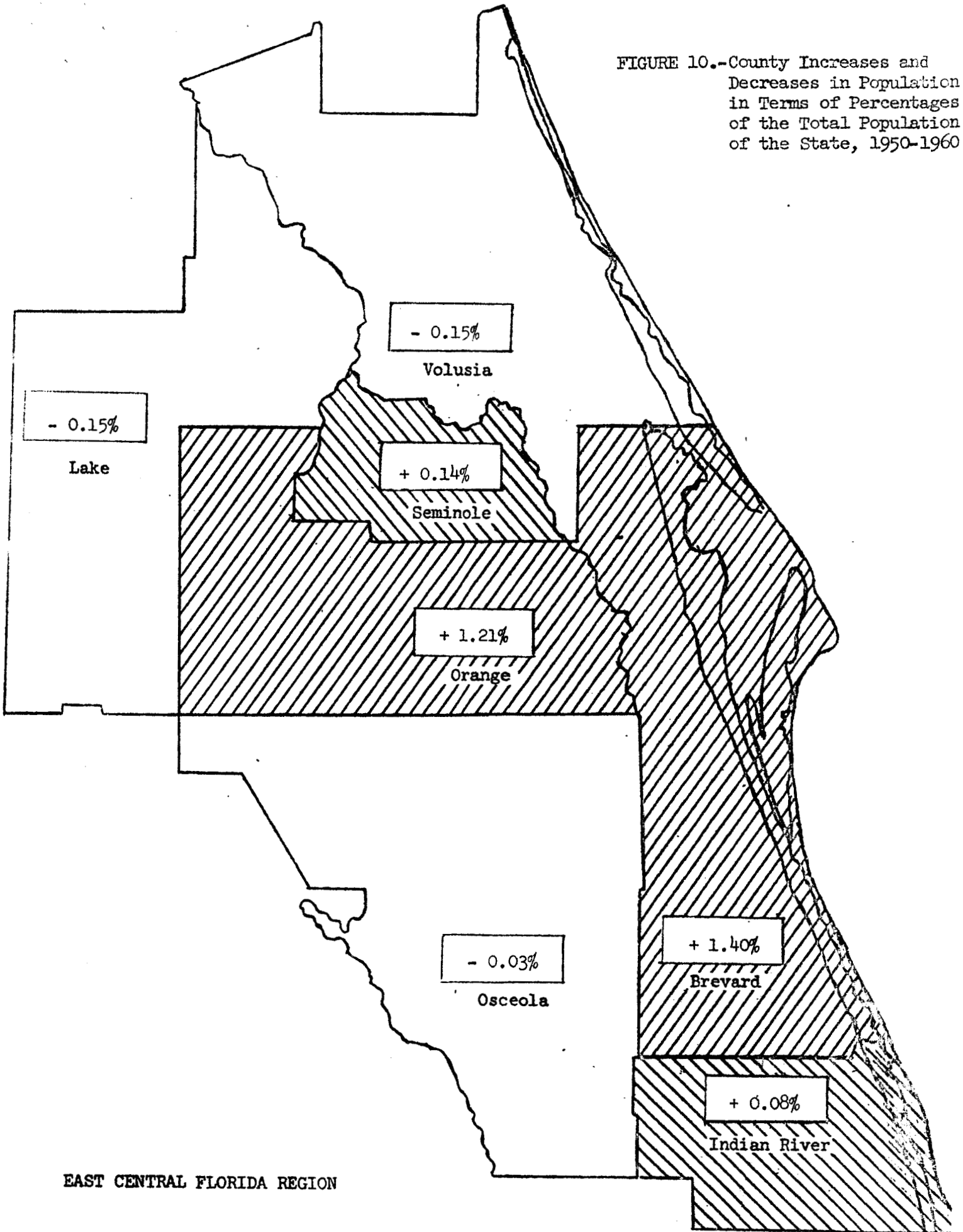
(1) That the population of the Brevard-Orange area will continue to grow more rapidly than that of the state as a whole to 1980.

(2) That the population of Indian River and Seminole Counties will continue to grow slightly more rapidly than the population of the state.

(3) That the population of Lake, Osceola, and Volusia Counties will continue to grow somewhat less rapidly than the population of the state.

With these assumptions a series of extrapolations were made for the three groups of counties. Each extrapolation was made in terms of per cent of the state total population. These percentages were converted to numbers by applying them to the state projections to 1965, 1970, 1975,

FIGURE 10.-County Increases and Decreases in Population in Terms of Percentages of the Total Population of the State, 1950-1960



EAST CENTRAL FLORIDA REGION

and 1980 which had already been made. The resulting population numbers were summed and adjusted to add to the total population of the seven-county area for these years which had already been projected.

In the process of selecting the actual rates to be used in projecting the population of each of the three groups, knowledge of the social and economic structure of each county was taken into consideration. The final choice of rates of growth was arbitrary, but the choice did have the benefit of knowledge about the growth of the state and of its counties which had been accumulated during ten years of continuous study of Florida's population trends. The final step was to allocate the population of each of the three groups to the individual counties contained in each group. Here again, some arbitrary decisions had to be made after studying the relevant information on individual county growth.

Later, when revised population estimates for 1963 had been made and our population estimates for 1964 had been made for the first time, it became evident that the populations of some counties in the region were not behaving in the 1960's as would have been expected on the basis of earlier developments. It was therefore considered necessary to revise the assumptions on the basis of which the original population projections for the individual counties had been made.

The new assumptions are:

(1) That the population of Brevard County will continue to increase much more rapidly than that of the state as a whole to 1980.

(2) That the populations of Indian River, Orange, Osceola, Seminole, and Volusia Counties will grow somewhat more rapidly than the population of the state.

(3) That the population of Lake County will continue to grow somewhat less rapidly than the population of the state.

The original population projections for the individual counties in the region were then revised on the basis of these assumptions. The adjustments brought about only slight changes in the population projections for the region as a whole. The results of all this projecting are shown in two tables and four charts. Table 1 shows the "low" projections for the individual counties, the seven-county region, and the State of Florida for 1965, 1970, 1975, and 1980 in relation to actual census figures for 1960. Table 2 does the same for the "high" projections.

Figure 11 shows the "low" population projections for the individual counties as percentages of the projected state population in the same future years in relation to the percentages actually achieved in 1960. Figure 12 does the same for the "high" county projections. Figure 13 shows geographically the changes in the populations of the individual counties, in terms of percentages of the total state population, which

Table 1.--"Low" Population Projections for the Individual Counties, the Cape Kennedy Region, and the State of Florida in Relation to Census Population Figures for 1960.

County	1960 Census Population	1965	1970	1975	1980
Brevard	111,435	180,000	250,000	320,000	400,000
Indian River	25,309	33,000	41,000	49,000	60,000
Lake	57,383	64,000	72,000	80,000	90,000
Orange	265,538	325,000	380,000	435,000	520,000
Osceola	19,029	22,000	26,000	31,000	37,000
Seminole	54,947	70,000	85,000	105,000	130,000
Volusia	125,319	157,000	191,000	227,000	275,000
Region	658,960	851,000	1,045,000	1,247,000	1,512,000
State	4,951,560	6,000,000	7,000,000	7,900,000	9,200,000

Table 2.--"High" Population Projections for the Individual Counties, the Cape Kennedy Region, and the State of Florida in Relation to Census Population Figures for 1960.

County	1960 Census Population	1965	1970	1975	1980
Brevard	111,435	190,000	270,000	355,000	460,000
Indian River	25,309	35,000	45,000	56,000	70,000
Lake	57,383	70,000	82,000	93,000	110,000
Orange	265,538	335,000	410,000	510,000	650,000
Osceola	19,029	24,000	29,000	34,000	42,000
Seminole	54,947	75,000	96,000	125,000	160,000
Volusia	125,319	165,000	205,000	245,000	300,000
Region	658,960	894,000	1,137,000	1,418,000	1,792,000
State	4,951,560	6,100,000	7,200,000	8,300,000	10,000,000

FIGURE 11. - "Low" Population Projections for Individual Counties as Percentages of State Population Projections.

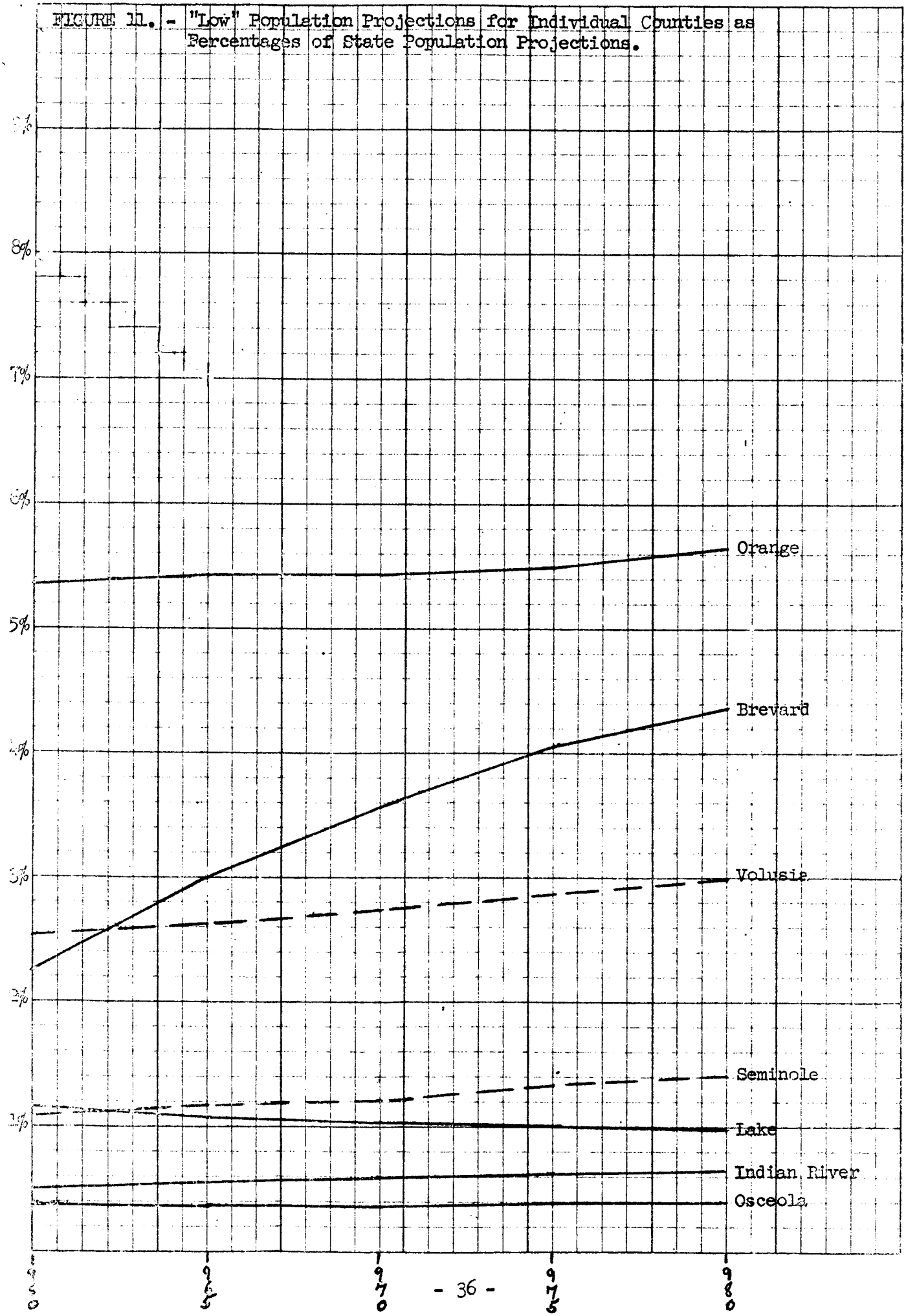
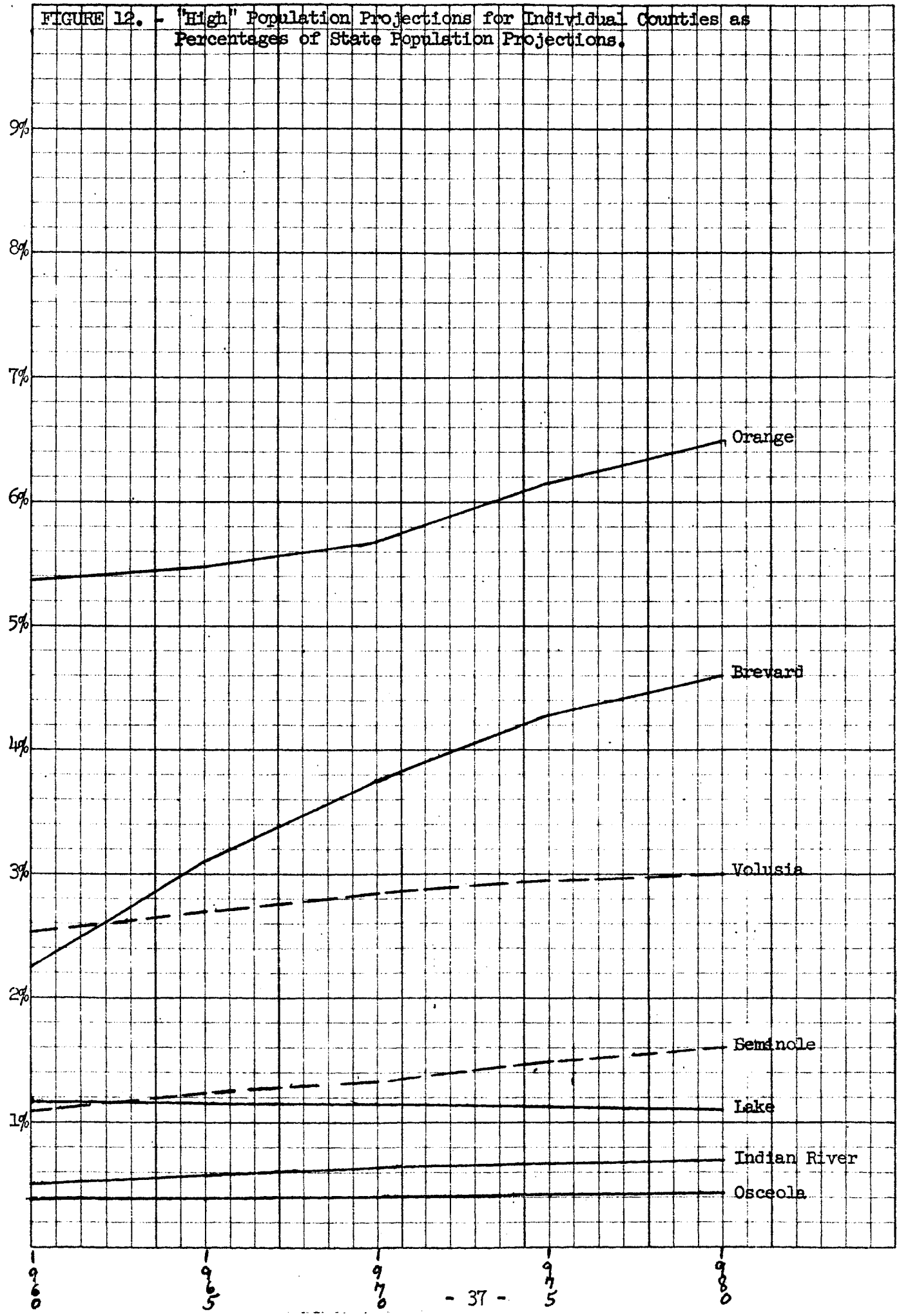


FIGURE 12. - "High" Population Projections for Individual Counties as Percentages of State Population Projections.



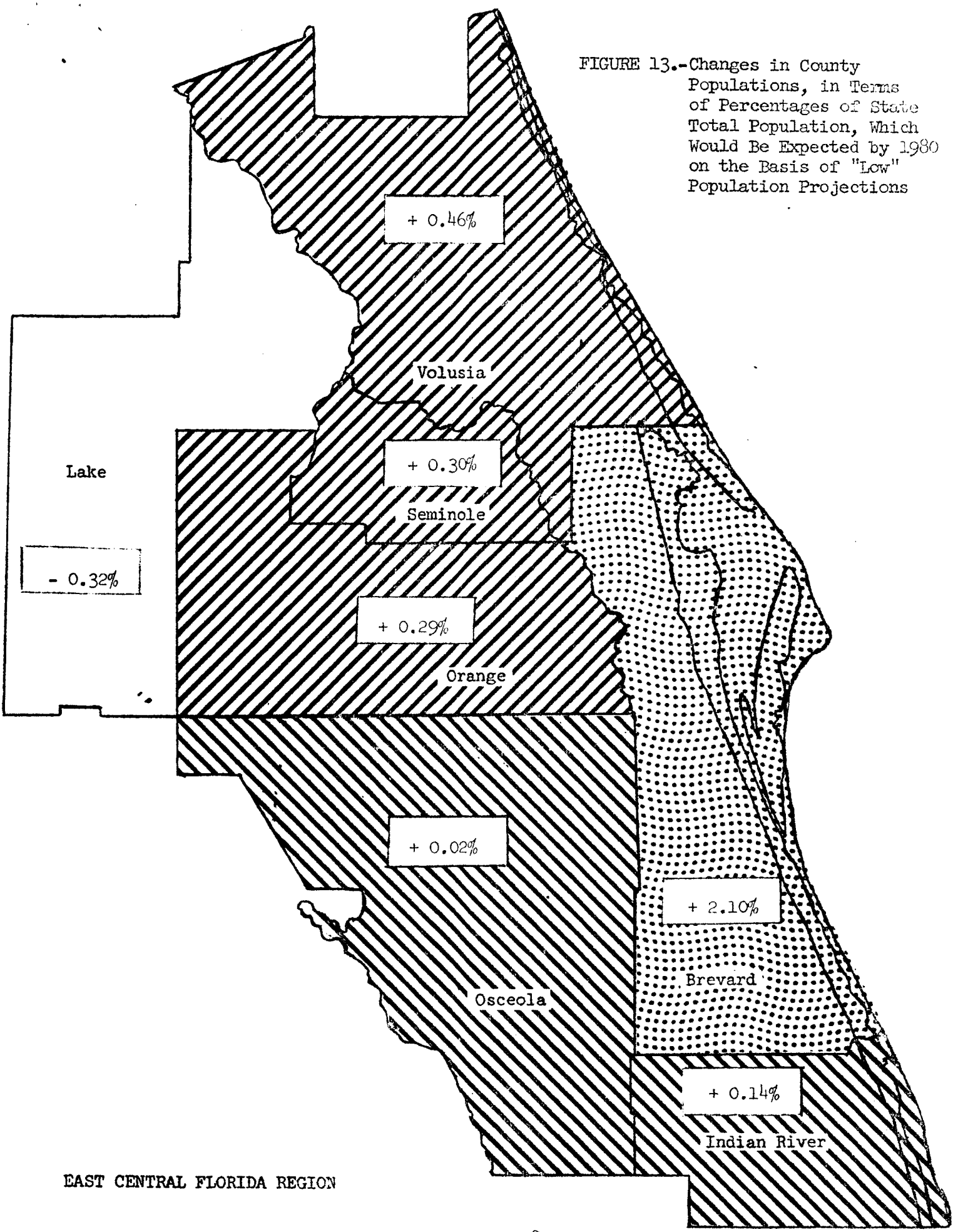


FIGURE 13.-Changes in County Populations, in Terms of Percentages of State Total Population, Which Would Be Expected by 1980 on the Basis of "Low" Population Projections

would be expected by 1980 if the "low" population projections should prove to be valid in practice. Figure 14 does the same thing on the basis of the "high" population projections.

It should be remembered that all of the results shown are projections based upon historical growth and recent developments and not definite predictions for the future, except possibly on an "other things equal" basis. As indicated in our recent revisions, the individual county projections are more subject to change as a result of unexpected events than are the seven-county totals to which they add. And the seven-county totals are more subject to change than are the state projections to which they are related. At best the county projections are but reasonable extrapolations of the past and present growth patterns of the seven counties.

If the "low" population projections should work out in practice, the population of the Cape Kennedy region would advance from 13.31 per cent of the state population in 1960 to 14.18 per cent in 1965, 14.93 per cent in 1970, 15.78 per cent in 1975, and 16.43 per cent in 1980. On the basis of the "high" projections, the region would have 14.66 per cent of the state's population in 1965, 15.79 per cent in 1970, 17.08 per cent in 1975, and 17.92 per cent in 1980.

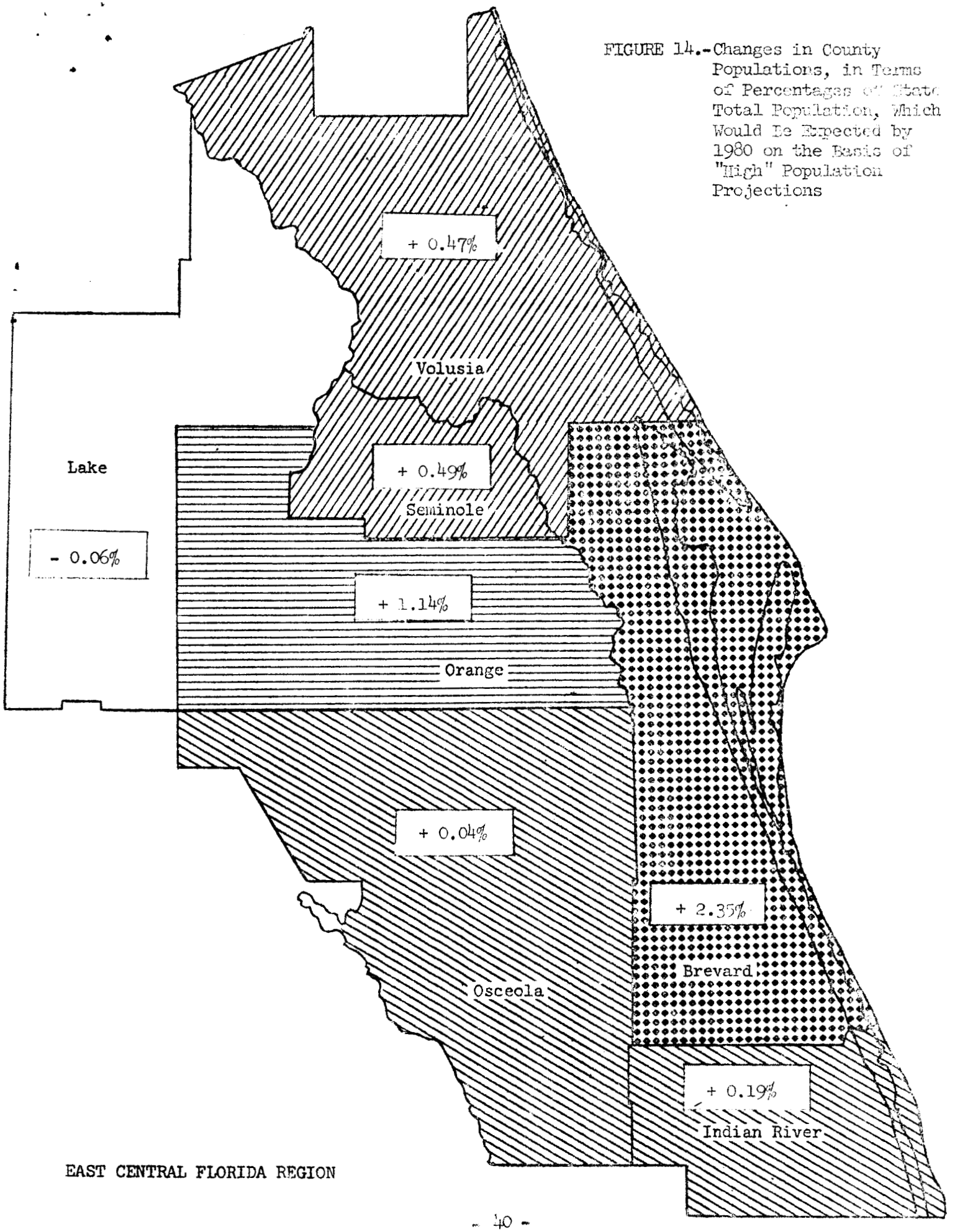


FIGURE 14.-Changes in County Populations, in Terms of Percentages of State Total Population, Which Would Be Expected by 1980 on the Basis of "High" Population Projections

Within the region, Brevard County's population would increase from 16.91 per cent of the regional total population in 1960 to 26.46 or 25.67 per cent in 1980 on the basis of the low and high projections, respectively. Seminole County's population would increase from 8.33 per cent to 8.60 or 8.93 per cent of the regional total, and Indian River's population would increase from 3.84 per cent to 3.97 or 3.91 per cent. The population of Lake County would decline from 8.71 per cent of the regional total to 5.95 or 6.14 per cent, that of Orange County would fall from 40.30 per cent to 34.39 or 36.27 per cent, that of Osceola County would go down from 2.89 per cent to 2.45 or 2.34 per cent, and that of Volusia County would decrease from 19.02 per cent to 18.19 or 16.74 per cent.